

## Amendments to the Claims

- 1. (Cancelled)
- 2. (Currently Amended) A process according to Claim [[1]] 5 wherein the exposed purine base comprises a structural form selected from the group consisting of single stranded region of nucleic acid, Hairpins, Loops and modifications to the phosphate backbone.
- 3. (Currently Amended) A process according to Claim [[1]] 5 wherein the technique comprises metal affinity.
- 4. (Currently Amended) A process according to Claim [[1]] 5 wherein the captured nucleic acid product comprises single-strandedness.
- 5. (Previously Presented) A scalable process for the highly selective, high yield separation of a desired recombinant polymerase from undesired nucleic acid, comprising:

exposing purine bases present within either the desired nucleic acid product or undesired nucleic acid by a process selected from the group consisting of selective thermal denaturation and renaturation, alkaline denaturation, and restriction enzyme digestion yielding single-stranded overhangs;

capture of the desired nucleic acid product or undesired nucleic acid by a technique selective for the exposed purine bases; and

separation of the desired product from the undesired nucleic acid;
USSN 10/737,403;Docket 015AUS of USPTO Customer 26830
Page 2 of 6

wherein the desired product comprises recombinant polymerase.

- 6. (Currently Amended) A process according to Claim [[4]] 5 wherein the exposed purine bases of single-stranded undesired (or desired) nucleic acids facilitate a separation step selected from the group consisting of: immobilized metal affinity chromatography (IMAC).
- 7. (Currently Amended) A process according to Claim [[1]] 5 comprising introducing single strandedness as an exposed purine base.
- 8. (Currently Amended) A process according to Claim [[1]] 5 comprising a thermally based process in which a nucleic acid contaminant is rapidly cooled to below 65°C and is captured by an affinity method.
- 9. [Currently Amended] A process according to Claim [[1]] 5 performed after an alkali based process in which genomic DNA or other nucleic acid contaminant is rapidly neutralized and is captured by an affinity method.
- 10. (Cancelled)
- 11. (Currently Amended) A process according to Claim [[1]] 5 wherein undesired other plasmid isoforms selected from the group consisting of open circular ("nicked") and linear plasmid isoforms are selectively removed from the desired supercoiled plasmid DNA product.

- 12. (Previously Presented) A process according to Claim 9 wherein undesired other plasmid isoforms selected from the group consisting of open circular and linear plasmid isoforms are selectively removed from supercoiled plasmid DNA product.
- 13. [Cancelled]
- 14. (Currently Amended) A process according to Claim [[1]] 5 in which the separation is achieved by adsorption on chelated metal.
- 15. (Currently Amended) A process according to Claim [[1]] 5 in which the separation is achieved using multi-channel plates.
- 16. (Currently Amended) A process according to Claim <u>5</u>4 wherein the desired product comprises Taq polymerase.
- 17. (Currently Amended) A process according to Claim [[1]] 5 in which the separation is achieved using magnetic particles.
- 18. (Currently Amended) A process according to Claim [[1]] 5 in which the separation of multiple samples is achieved in parallel fashion.
- 19. (Currently Amended) A process according to Claim [[1]] 5 in which the captured nucleic acid comprises a moiety selected from BACs, PACs and YACs.
- 20. (Currently Amended) A process according to Claim [[1]] 5 in which the captured nucleic acid comprises a plasmid.

- 21. (Currently Amended) A process according to Claim [[1]] 5 in which the captured nucleic acid comprises genomic DNA.
- 22. (Currently Amended) A process according to Claim [[1]] 5 in which the captured nucleic acid comprises RNA.
- 23. (<u>Currently Amended</u>) A process according to Claim [[1]] 5 in which the capture technique comprises HIC.
- 24. (Currently Amended) A process according to Claim [[1]] 5 in which the capture technique comprises RPC.
- 25. Cancelled